OBSTETRICS

Copyright, 1900, by Obstetrics Co. Entered at the New York Post Office at Second-class Rates.

Vol. II. DECEMBER 1900. No. 12

Original Articles.

CEPHALIC VERSION.

By Dr. F. Horn,
Spesialist in Diseases of Women, Cologne.

WHEN we speak of version we are supposed to mean podalic version. This proves well enough that although there is a cephalic as well as a podalic version, only the latter is practiced, and some do not even know of the former. The neglect of cephalic version is typical of the history of medicine, in which discoveries are made become popular, are for a time forgotten, and are then resurrected and their proper limitations established.

Hippocrates regarded breech presentations, per se, as very dangerous and therefore never permitted podalic version. His aim was always to cause presentation by the vertex. Celsus mentions podalic version, but only practiced it in the case of dead children.

Later podalic version was again forgotten and only cephalic version was practiced until 1550, when Ambrose Paré again introduced podalic version, which was subsequently practiced almost exclusively. Justine Sigismundin practiced both methods and properly estimated the value of each. She preferred podalic version.

Flamant departed far enough from the Hippocratic standpoint to advocate cephalic version even in breech presentations.

* Translated for Obstetrics from Monatsschrift für Geburtshülfe und Gynækologie, Vol. xii., No. v.

Digitized by Google

history-ofobgyn.com
obgynhistory.net

In this he was followed by Ritgen and Wehn, but opposed by Hohl. Flamant and his followers, addressing themselves to the technique, proceeded as follows: They pushed up the fetus by the breech or thighs, endeavoring thus to bring the head to the pelvic brim, but in this manipulation the arm of the accoucheur prevents the head from entering the brim and when the arm is removed the breech usually resumes its former position.

The term cephalic version was formerly used by many only to signify the conversion of a breech presentation into one of the vertex, "the reduction of the head" or some similar expression being used to signify the conversion of a shoulder presentation or an oblique position into a presentation of the vertex (Mattei and others).

Hohl remarks that it is not to be wondered at that after reintroduction of podalic version, cephalic version, or the replacement of the head, as he terms it, was not favored, but on the contrary, was regarded as useless, since neither the necessary conditions nor the indications were known, nor did the operators possess the necessary skill.

The following authorities, however, still believe in cephalic version: Deventer, Smellie, Stoltz, Jacq. de Breyt, Flamant, Fr. Benj. Osiander, d'Outrepont, Wigand, E. v. Siebold, Busch, Jörg, Naegele, Kilian, Trefurt, Wright, Haussmann, Zeitmann, Carus, Ritgen, Wehn, and others.

Cephalic version may be accomplished in various ways:

1. The patient lies upon the side toward which the head deviates (an external support, padding, etc., is often subsequently necessary to keep the head in position).

2. External manipulation only, as practiced by Wigand.

3. Internal manipulation only.

(*a*). Busch, "the direct internal method," In the "crossbed" position the head is seized by the fingers of the hand corresponding to the side in which the head is located and drawn down as far as possible, this being done between contractions and, if possible, without rupture of the membranes. The head is held in its new position by the fingers.

(*b*). d'Outrepont, "the indirect internal method." By the hand corresponding to the side opposite to that in which the head is located, the shoulder is pressed toward the breech and the head allowed to fall by its own weight into the space

Digitized by Google

history-ofobgyn.com
obgynhistory.net

thus made vacant; this maneuver being also practiced between the pains, and if possible without rupture of the membranes.

These two methods, which, it is true, had been used before the time of Busch and d'Outrepont, but which were first perfected and established by these authors are, according to modern views, not to be thought of except as combined with extreme manipulation and being thus made to resemble the combined, or, as Muller proposes to call it, the bi-polar method.

4. The combined method as practiced in Vienna by C. Braun (Hohl, Braxton Hicks), Braun himself calls this a combination of Wigand's external method with the methods of d'Outrepont and Busch. He practiced it in the dorsal and lateral positions with the pelvis raised as well as in the "cross-bed" position. Like the two internal methods, however, it is often practiced in the "cross-bed" position, and (Wehn) in the knee-elbow position, since it affords the best security against prolapse of the cord.

To-day internal version is distinguished from the combined method only by the fact that in the former the whole hand is passed into the uterus. The external hand, however, assists in the version and thus the method is, in a certain sense, also a combined one. Nevertheless, in internal version the entire hand used internally is the operating hand, while in the combined method both work together, although, strictly speaking, only two fingers are used. It seems to me that the more skillful the accoucheur the more will he employ the external hand, the use of which is entirely without danger to limit the use of the internal. A sharp line of distinction between the two methods cannot always be drawn.

In so far as Wigand employed external version to bring the head to the pelvic brim and then ruptured the membranes in order to cause its fixation in that position in uterine inertia, e.g., in hydramnion, he may be regarded as having had a sphere in the establishment of internal cephalic version. He was supported by E. Martin.

Unfortunately, external version is at present too much neglected, not only by midwives but by physicians, although it gives the best possible results. For example, if the amniotic sac is unruptured and the pelvis is normal the second of twins may almost always be turned, as Brosin says, if one will only

Digitized by Google

history-ofobgyn.com
obgynhistory.net

take the time. According to A. Aranowitsch, among 144 cases of version the external method was not tried at all in 78. In the remaining 66 cases it was successful 36 times. None of the mothers died, and only two children. Internal cephalic version he regards as uncertain and unsafe. He lays great stress upon the fact that midwives should be more thoroughly instructed in the diagnosis of transverse presentation and in the technique of external version that the number of neglected transverse positions may be reduced.

Let us illustrate what may be accomplished even during labor by external version, without regard to what pole of the fetus is brought down.

Anterior parietal presentation, head at brim and movable, extensive prolapse of cord, scanty amount of amniotic fluid (high rupture of membranes), breech brought down by external version, gradual extraction of a living child by drawing down a foot.

During pregnancy one may employ external cephalic version to restore the fetus to its normal position, since even if the attempt is usually unsuccessful no harm can be done. The old position is usually reassumed because the uterus has already been stretched in a position to correspond to the original abnormal position and the mobility of the fetus is great. Southwick indeed advises that in breech cases with no pelvic contraction an attempt should be made to bring about a restoration of the vertex by the combined method, the most favorable period being two weeks ante-partum. He pushes up the breech toward the side to which the back is directed, conversing meanwhile with the patient to divert her thoughts and leading her to believe that only an examination is contemplated. The external hand presses the head into the pelvic brim. After the new position has been maintained for from twenty-four to forty-eight hours uterus and fetus will have accommodated themselves to the new position.

Mevrer prefers, in view of the frequent unpleasant complications of breech cases to examine the patient every two weeks after the eighth month and to perform external version under anesthesia if necessary.

Krantz thinks it much easier in external cephalic version to let the head take the longer course, that is, to the fundus, and then to the opposite side before reaching the pelvic brim.

Digitized by Google

history-ofobgyn.com
obgynhistory.net

In this manner the shoulder, already somewhat fixed, is made more movable. When it is certain that the head is at the brim it must first be fixed to prevent the development of face or brow presentations, and one should ascertain that there is no prolapse of the cord. That external version during pregnancy with subsequent fixation by pads, position, bandaging, manual fixation, etc., can also give good results, is shown by the statistics of Sarwey in connection with the induction of labor in cases of pelvic contraction. In 23 cases attempts at external cephalic version by Wigand's method were made, many of which had to be frequently repeated; 20 cases (87 per cent.) were successful, and only in 3 cases (13 per cent.) did unfavorable conditions (placenta previa lateralis, light grade of uterus arcuatus) cause failure. Simple external version sufficed in 3 cases to cause permanent correction of the mal-position.

I would like to quote here a saying of Lumpe, cited and approved by Scanzoni: "He who in every transverse position instinctively draws down a foot is as irrational as a physician who uses one remedy under all circumstances and for every kind of disease."

For completeness I must refer to Ritgen's "beiwendung" a procedure applicable to both podalic and cephalic version. It consists, as Wehn says, "simply in the assumption of the lateral position together with puncture of the membranes. Ritgen held that early puncture of the membranes was all the more necessary, since when there is too much amniotic fluid there is too often very early spontaneous rupture of the membranes and rapid discharge of the amniotic fluid.

The advantages of external cephalic version are universally recognized, but why is the internal, the combined method, almost neglected at the present time. There is every reason for believing that the advantages of the external method (vertex delivery with its advantages for mother and child) also attend the employment of the internal method.

P. Müller's verdict, approved by Fehling, is as follows: "Cephalic version is as dangerous and difficult as it is theoretically correct." P. Müller regards the procedure as harmless, gratifying if successful, and leaving us free to adopt other means if it is unsuccessful. According to him cephalic version cannot be compared statistically with podalic version, e.g., the results of Eranque and Dorn maternal mortality ⅙

Digitized by Google

history-ofobgyn.com
obgynhistory.net

per cent., fetal 25 per cent., since the cases of podalic version included the most severe cases, placenta previa, neglected transverse positions, unsuccessful cephalic versions, while the cases of cephalic versions were uncomplicated ones. Müller thinks that under similar conditions the results of podalic version would show its superiority to the cephalic method.

Runge regards internal cephalic version as almost obsolete. Ahlfeld says that it will seldom be called for. Zweifel condemns it, and Shauta also will have nothing of it.

Kehrer's view is similar. He advises that when in cases of transverse position the lateral posture and Wigand's method have been unsuccessfully tried, complete cervical dilatation should be awaited and podalic version then performed. "If, however," says he, "one would do cephalic version in transverse positions the following conditions should be present:

1. "The head must be movable and lower than the breech (Scanzoni, Döderlein, and Schroeder agreeing).

"2. An intact or only just ruptured amniotic sac (Naegele, Schroder, Müller, Zweifel, and Döderlein agreeing—Spiegelberg, v. Granque, Hohl, Stoltz, Trefurt, Wright, and, in part, also Scanzoni, agreeing). Deckner reports a case of rupture of the uterus in attempted cephalic version after the amniotic fluid had drained away.

"3. Good contractions (Scanzoni, Naegele, Zweifel, and Müller agreeing—v. Franque, Moriz, Spiegelberg, Schroeder, and Braun disagreeing). These, on the contrary, consider that the procedure will stimulate pains, and, if necessary, use oxytoxics.

Hüter thinks that the uterine inertia which follows cephalic version very often delays delivery for many hours, thus displeasing the laity who like to see positive results in midwifery. Spiegelberg is of a similar opinion.

4. A normal pelvis (Scanzoni, Hüter, Zweifel, Döderlein, v. Winckel and Spiegelberg agreeing). Naegele, Hohl, Spaeth and Braun favor cephalic version even in moderate pelvic contraction. Schroeder advises against it in "high grades of pelvic narrowing." Müller thinks a normal pelvis the most important condition.

5. An expanded lower uterine segment. Naegele and Spaeth require a fully dilated cervix. Zweifel that dilatation shall

Digitized by Google

history-ofobgyn.com
obgynhistory.net

be about complete. According to Müller the cervix should have disappeared. According to Winckel it should have completely disappeared in primiparæ and "at least almost" in multiparæ. Schroeder, on the contrary, sees the future of the operation in cases of incompletely dilated cervix during the first stage of labor when extraction is not to be thought of. Braun would explain many of the cases of delay in labor after cephalic version by the fact that the cervix had not disappeared and that the operation was undertaken before distention of the cervix, the head remaining above the internal os, so that a large part of labor remained to be completed, or that a relative dispro-proportion was not recognized. Budin absolutely failed to accomplish cephalic version in one of his cases, and thought the obstacle to be a sharply defined and projecting os or contraction ring.

6. Absence of prolapse of cord or arm (Naegele, Spiegelberg, Schroeder, Müller and Döderlein agreeing; Moriz and v. Winckel disagreeing).

In the case of prolapse of an arm Hohl permits cephalic version only if with roomy pelvis, good contractions and a small head there is a prospect that the head may be delivered in spite of the prolapse.

7. The lack of imperative indications for delivery, e.g., hemorrhage from placenta previa (Scanzoni, Spaeth, Spiegelberg, Hohl, Schroeder, Naegele, Zweifel,. Müller, v. Winckel, Döderlein).

Hohl recognizes only conditions 6 and 7, but requires also that the uterus must be regular in form. Another condition of former authors: "The head must be brought into the vertex presentation in one of the oblique diameters with the occiput forward" (from the to forward inch), he does not recognize. If this view were adopted he thinks that we would also have to dispense with podalic version, since here the belly of the child may be turned to the front.

Naegele requires still another condition. The fetus must be living and viable, since its preservation is the chief object of the operation. Collecting the statistics of different institutions, Moris found among 22,257 deliveries 443 podalic and 29 cephalic versions. Sickel found among 444,163 deliveries 3,475 podalic and 53 cephalic vesions. In the podalic versions 291 mothers and 2,041 children were lost. In the cephalic 1 mother

Digitized by Google

history-ofobgyn.com
obgynhistory.net

and 15 children. According to Kehrer's statistics, 6.3 per cent of all versions are cephalic. We must mention a now forgotten publication of Wehn dedicated to his chiet, Ritgen. Among 20 versions 11 were cephalic and all in private practice, some of them for urgent indications. In 3 of them the cephalic method was not successful and it became necessary to resort to the podalic. In 2 of these there was severe bleeding due to premature separation of the placenta, and in one a stricture at the internal os. One of these 3 children died, not however as a result of the version, since the cord was found pulseless during the operation. No harm resulted to the 3 mothers from the 2 versions in each case. Excepting slight temperature elevations there were no bad results for the mothers in the 11 cases. Of the 11 children 4 died before delivery, but not as the result of the operation; 2 died during delivery after the version had been successfully performed. In one case there was prolapse of the cord which was successfully replaced, but came down again and finally caused death of the fetus, in 1 case there was an obliquely contracted pelvis; 5 children survived after delivery, including among these the 2 (cases 10 and 11) who were subjected to both kinds of version.

Among the 11 cases therefore the results in 5 were unsatisfactory. 2 children died during delivery and three times delivery could not be brought about and podalic version had to be done in the interest of the mother.

The following 9 cases were observed, and in some cases operated upon by myself:

CASE 1.—Age 30; III-para; 1st and 2d labors ended by forceps; generally contracted slightly flat pelvis; sp. 25, cr. 27, tr. 29, ext. conj. 17½. Entered hospital for induction of labor Oct. 27. An elastic bougie was passed between the uterine wall and the membranes and about 30 cc. of sterile glycerine slowly injected. No pains appearing, injection was repeated on the 28th; 2d oblique position. On the 29th at noon, the cervix being almost completely dilated and membranes not ruptured, int. cephalic version was done. Head fixed in inlet by external pressure and kept in position at first by the internal hand, artificial rupture of the membranes. Marked uterine inertia successfully combatted by hot cloths over the abdomen. Complete perineal rupture threatened on

Digitized by Google

history-ofobgyn.com
obgynhistory.net

account of old cicatrices from incisions. Lateral incision, with suture and primary healing. 2¼ p.m. Spontaneous delivery; child slightly asphyxiated, cord three times around neck. Uterine douche lysol, 1 per cent. since temperature immediately after delivery was 38.5° (axillary). Puerperium normal, except temperature of 38.4° on 3d day. Child weighed 2,700 g.; length 48 cm.; head measurements 33, 36, 32, 10½, 6½, 8, 10, 12. Condition good.

CASE 2.—Age 27; IV-para; 2 abortions; 1 forceps; generally contracted pelvis; sp. 22½, cr. 24½, tr. 30, ext. conj. 18½, diag. conj. 10½. Induction of labor. Nov. 23d 20 cc. of sterile glycerine slowly injected. The eye of the bougie was always wrapped around with a thin layer of sterile gauze to make the injection gradual and the other end tied or clamped to prevent egress of fluid. Complete inertia, injection repeated Dec. 25, 11 a.m. and 7½ p.m., each time 20 cc. Pains developed, but became much weaker the next morning. Only improved after the application of hot moist towels. 10 a.m., rupture of membranes; 2d transverse pos., prolapse of cord, low implantation of placenta; chloroform narcosis; int. cephalic version; fixation of head by ext. pressure. 7½ a.m., 27th. Spontaneous delivery; 2d vertex position; uterine injection 1 per cent. lysol. Temp. 1st 2 days 38.2° and 38.3°. No further trouble. Head measurements 31, 36, 31, 10, 6½, 7½, 9½, 12.

CASE 3.—Age 25; I-para; pelvis normal 26½, 29, 31, 19¾ cm.; much edema of legs and abdomen; much albumen in urine. Circum. of belly 115 cm. Twins (and doubtless as later proven one ovum); 1st child in second breech position. Extraction of shoulders and head by Veit-Smellie method without difficulty; child nevertheless much asphyxiated; not resuscitated; 2d child in transverse position; ext. version unsuccessful, light chloroform narcosis, rupture of membranes and prompt int. cephalic version. Fixation of the head. So much inertia that fixation had to be maintained almost 4 hours. Spontaneous delivery in 1st vertex position nearly 6 hours after the version. Child living and healthy. Weight 3,220 g., length 49 cm., 35, 38, 33; 11½; 7, 9; 11, 13. 24 hours after delivery 1 eclamptic attack, amaurosis lasting for 3 days. 1½, alb. in urin (Esbach). Under proper diet gradual disappearance of all symptoms. Mother and child discharged in good health on the 13th day after delivery.

Digitized by Google

history-ofobgyn.com
obgynhistory.net

CASE 4.—Age 35; IV-para; 1st and 2d labors normal, 3d a transverse position; pelvis 27½, 31½, 33½, 21½; 1st trans. pos.; cervix almost obliterated. Evening of March 22 rupture of membranes and int. cephalic version. Next day, 3 a.m., spontaneous delivery in 2d vertex position. Child weighed 4,150 g., length 52 cm. Head measurements 38, 41, 37; 12; 7½, 9; 11, 14 cm.

CASE 5.—Age 38; III-para; 1st delivery spontaneous; 2d labor transverse positon. Rachitic flat pelvis, with slight general contraction 26, 28, 28½, 16½ cm.; 2d transverse position. Aug. 21st, 10½ p.m., cervix completely dilated, prolapse of cord. Light chloroform narcosis, rupture of the membranes, prompt replacement of the cord followed by cephalic version. Fixation of the head by external pressure kept up during 2 pains. 11¼ p.m., spontaneous delivery in 2d vertex position. No further trouble. Child weight 3,950 g., length 51 cm. Head measurements 38, 41, 37; 12; 7½, 9; 11, 14 cm. Discharged recovered Aug. 30th.

CASE 6.—Age 27; III-para; forceps in 1st and 2d labors; rachitic flat pelvis, 27½, 29½, 31½, 18¾ cm.; 2d b. transverse position (back posterior). First examination not made until after rupture of membranes; os the size of a 5-mark piece, cervix not yet obliterated, extensive prolapse of the cord; chloroform narcosis. Podalic version was not practicable owing to incomplete dilatation of os and high position of fetus. The head, however, could be easily reached, and was found on the right with the face directed to the front. Lack of space made it impossible to seize the head by the usual method, I therefore passed 2 fingers into the child's mouth and aided by the external hand drew the head down and brought about a 1st position of the vertex. Fixation of the head by external pressure, and by pressing it into the pelvis during pains. Left lateral decubitus. Hot cloths upon belly to stimulate pains. The fetal heart sounds becoming slow and irregular and meconium appearing, another light chloroform narcosis was instituted and forceps were applied, the head being movable and the os the size of a 5-mark piece. (Unfortunately podalic version was, as already mentioned, impossible or it would have been preferred). Tractions were made only during the pains. After ½ hour the head was

Digitized by Google

history-ofobgyn.com
obgynhistory.net

well within the pelvic cavity and the cervix, except its much swollen anterior lip, had disappeared. The latter was gradually pushed up and the short forceps applied. Child asphyxiated, but resuscitated. Died however 14 hours later from the results of asphyxia. Uterine injection of 1 per cent. of lysol solution. Puerperium afebrile. Child weight, 3,700 g., length 50 cm., head measurements 39, 40, 36; 11; 9, 10; 11½, 12½.

Case 7.—Age 27; IV-para; 3 forceps deliveries; flat rachitic and generally contracted pelvis; sp. 25, cr. 26¾, tr. 29, ext. conj. 17½. Patient comes at physician's advice for induction of labor. Jan. 10, 11 a.m., cervix and vagina tamponed with sterilized gauze; good pains. Next morning at 8 cervix fully dilated, cord prolapsed and pulsating; 1st transverse position; int. cephalic version with rupture of the membranes. Attempt at reposition of cord not being successful, podalic version and extraction. Child asphyxiated, but resuscitated. Died 6 hours later from general weakness. Weight 1,850 g., length 40 cm., head measurements 31, 33, 29: 7, 8; 9½, 11 cm.

For reasons to be mentioned below the 2 following are not wholly suited to the list. As we shall see, however, they deserve mention.

Case 8.—G. J., age 25; II-para; 1st labor normal; no history of syphilis; pelvis normal; sp. 28, cr. 31, tr. 31½, d. b. 20 cm. Great abdominal distention prevented determination of position by external examination. Fetal heart sounds audible; hydramnion; os completely dilated; cervix obliterated; amniotic sac much distended. Artificial rupture of membranes; powerful discharge of about 3-4 liters of fluid; 1st transverse position, head to the left first and easily reached. Cephalic version, combined method, the whole hand being introduced and supported by external pressure. Left lateral decubitus; fixation of head by external pressure; hot moist cloths upon belly to increase pains. Spontaneous delivery 1½ hours later. Child weight 2,850 g., length 48 cm., head measurements 37, 43, 35; 11; 7, 19; 9, 14 cm.: bones of skull soft and movable. Light grade of hydrocephalus; 3d stage normal; puerperium afebrile; transitory foulness of lochia. In spite of the sudden emptying of so much amniotic fluid there was no development of uterine inertia.

Digitized by Google

history-ofobgyn.com
obgynhistory.net

Probably the internal cephalic version in this case was unnecessary since the external cephalic method would have been sufficient. The position, however, could not be discovered before rupture of the membranes on account of the excessive quantity of amniotic fluid and the hand which ruptured the membranes was carried at once into the uterus, reaching the head without difficulty. The latter was easily seized and drawn down by Busch's method. Podalic version did not seem best, since the fetus was macerated and a too rapid emptying of the uterus might have resulted in atony.

In this case, however, this fear was not justified, since energetic contractions supervened. As already mentioned, Naegele demands as a pre-requisite for this operation, that the fetus shall be living and viable since its preservation is the chief object. In one case we might perhaps have predicted the death of the fetus by the hydramnion and failure of fetal heart sounds, but could not have been positive. We have already seen why the cephalic method was chosen. Even if I had been certain of the child's death I would hardly have changed my plan. To repeat: both podalic version by the combined method and, above all, the simpler method of external cephalic version would have succeeded in this case.

Case 9.—Age 29; ii-para; pelvic measurements, sp. 25; cr. 27; tr. 32¼; d. b. 19¼ cm. First labor normal. Aug. 30, 1 p.m. patient was brought in after being in labor for more than four days. Very anemic; pains weak; hemorrhage; membranes ruptured (time not known); very faulty tamponade of the vagina; second position of the vertex; head movable above pelvic brim in the left iliac fossa; heart sounds audible; os about the size of a 5-mark piece. Placenta extending from the left and almost filling the os. Cephalic version by the combined method; thorough tamponade of the vagina with sterile iodoform gauze; fixation of the head by external pressure and the lateral decubitus. Uterine inertia successfully combatted by the application of hot moist cloths. Subcutaneous infusion of ½ liter of salt solution; 3½ p.m. tampon expelled; 4.15 p.m. spontaneous delivery. Child died three and a half days later of general weakness (autopsy). Puerperium normal; weight of child 3050 g.; length 48 cm.; head measurement, 35, 38, 34; 7, 8½; 10, 13½.

Digitized by Google

history-ofobgyn.com
obgynhistory.net

This, then, was a second position of the vertex, with head deviating toward the left iliac fossa. Had there been no placenta previa, a gradual restoration of the head to its normal position might easily have been caused by placing the patient upon her left side. This was in the interest of the mother not to be thought of. Podalic version would have been impossible or at least would have subjected the patient to the danger of uterine rupture, for the amniotic had long since drained away. and the uterus was pretty well contracted about the fetus, and the cervix very soft. Under these condition active measures would have been extremely dangerous. (See Braun v. Fernwald, Diskussion der *Wiener geburtshilfe Gesellschaft*, 15, 2, 1898).

Perhaps for this case the term proposed by Mattei and Hohl, replacement of the head (see above) would have been more correct. At all events, the method was one of compulsion not of choice. It succeeded, therefore it was correct. The head drawn down and fixed by external pressure sufficient in connection with the vaginal tamponáde to stop the hemorrhage and spontaneous delivery could be awaited. The other alternative would probably have been perforation, as the forceps could hardly have been used.

I will now consider the first seven cases, the cases of typical internal cephalic version.

All the children were born alive and only two of them died subsequently. Child 6 died 14 hours post-partum from the results of prolapse of the cord present before the cephalic version, the two periods of anesthesia, and the long duration of the forceps extraction. The version had but very little to do with its death. Child 7 died 6 hours post-partum from general weakness. Perhaps the podalic version and extraction of this premature child was alone sufficient to cause death. Perhaps if podalic version had been performed at once the child would have lived. At any rate, the attempt at cephalic version was only partly responsible. Child 8 was dead when the operation was undertaken. Child 9 died from the anemia resulting from the placenta previa.

As far as the children are concerned, then, the results were good.

Anesthesia was employed in cases 1, 4, 7, 8, and 9, but not in cases 2, 3, 5, 6. Fever was only noted in case 1, 38.5

Digitized by Google

history-ofobgyn.com
obgynhistory.net

immediately post-partum and on the second day 38.4° (axillary).

The uterus was irrigated in cases 1, 2, and 6.

In addition to cephalic version the following operations were undertaken.

1. Lateral incision in case 1.

2. Forceps (both low and high operations) in case 6.

3. Podalic version in case 7.

4. Replacement of cord in cases 2, 4, 6, and 7 (in the latter without success).

5. Artificial rupture of the membranes in cases 1, 2, 3, 4, 5, 7, and 8 (in cases 6 and 9 the membranes had already ruptured).

6. Vaginal tamponade in case 9.

7. Infusion of saline solution (subcutaneous). All operations were performed either in the dorsal or the cross-bed position.

Uterine inertia of mild type had to be combatted after version in cases 1, 3 and 6. In case 9 it was present before the version, but there was rapid improvement after.

Tnere was prolapse of the cord in cases 2, 5, 6, 7; all were cases of pelvic contraction. In cases 2, 5, and 6, replacement was successful. In the first two of these cases no harm resulted to the child, but it must be admitted that in case 6 the too early death of the child may have been, in small part, due to the complication. In case 7 prolapse of the cord was a grave complication, since replacement could not be effected. Resort to podalic version was necessary in order to save the child's life. This case illustrates Kehrer's sixth contra-indication to cephalic version.

The pelvis was normal in cases 3, 4, 8, and 9, generally contracted in case 2; rachitic flat, in case 6; generally contracted and rachitic, flat in case 6.

Since in cases 1, 2, and 7 premature labor was undertaken the pelvis was not relatively too small. Therefore the pelvic narrowing cannot be regarded as an obstacle, for in case 7 the podalic version was made necessary, not by the narrow pelvis, but by prolapse of the cord. The narrow pelvis was at fault in case 6, but what other course could have been pursued?

Podalic version without thorough dilatation by the colpeurynteur would have been impossible. The attempts to reach

history-ofobgyn.com
obgynhistory.net

the feet showed that they were too high for the combined method. No amniotic fluid remained and therefore the mobility of the fetus was reduced to a minimum. Hence the head, although easily reached, could not be drawn down by the usual methods. It was only by inserting two fingers in the mouth that sufficient force could be exerted. Trachet was able, in a similar case (decomposed fetus, version impossible) to insert his finger into the mouth and draw the head down so that craniotomy could be performed. He thought that this might be feasible, not only in the case of dead children, but that it might later be employed in cephalic version. Why he did not decapitate does not appear. The question, whether in case 6 colpeurysis and subsequent podalic version would have been preferable resolves itself into the still undecided question: whether, with the head high, version or the high forceps operation is preferable.

I prefer, in opposition to Toth version. This case I treated otherwise, partly because I was interested in cephalic version and partly because of the erroneous idea that the head might perhaps be driven into the pelvis without the high application of the forceps. The method was successful, even if wearisome, and therefore the treatment was justified. It is very doubtful whether colpeurysis and podalic version would have been less dangerous to the child. According to Schröder's view, the small amount of cervical dilatation, the unyielding condition of the cervix, and the uterine inertia combined to make cephalic version preferable, since in spite of the prolapse of the cord the child was at first in no danger. In another case I would prefer colpeurysis, podalic version, and extraction. It is to be noted that Barnes proposes that under these circumstances the head should be fixed in the pelvic brim by traction with the forceps.

The os was comparatively dilated when cephalic version was undertaken, in cases 2, 3, 5, 7, and 8, very nearly dilated in cases 1 and 4. In cases 6 and 9 it was only 5 cm in diameter, and in case 6 the body of the cervix was still present.

Let us consider in particular the two cases of induction of labor (cases 1 and 2; case 7 does not come under consideration on account of the podalic version). In both cases assistance was necessary to rectify the position. The external method was not successful and the combined was adopted. Both chil-

Digitized by Google

history-ofobgyn.com
obgynhistory.net

dren survived. It is very doubtful (see case 7) whether podalic version would have been as successful. I seek to avoid as much as possible the extraction of a premature child, and therefore the operation (podalic version) preliminary to such extraction since, as far as the children are concerned, I have had no good results. My chief object, then, is to secure a vertex position, and one must remember that the introduction of bougies, colporynteurs, the cervical tamponade, etc., may prevent engagement of the head or may push it away from the pelvic brim. After pains have begun and measures which may displace the head are no longer necessary, the head should always be brought to the pelvic brim by posture or by the external or combined method.

It is better when practicable to do this before beginning, since the manipulations may easily result in rupture of the membranes, and when this occurs with the head elsewhere than at the brim the well-known unpleasant consequences may result.

Von Sarwey's 37 primary vertex positions remained as such during induced labors with the exception of one (No. 60) in which podalic version and extraction were necessitated by prolapse of the cord and placenta previa lateralis; 54 children were born by the vertex, of whom 44 (81.5 per cent.) were living and 10 (18.5 per cent.) still-born. Six were born by the breech after being turned from vertex or transverse positions of whom 2 (33.3 per cent.) were living and 4 (66.7 per cent.) still-born.

Even if the application of the forceps becomes necessary after the head has entered the pelvis the dangers of forceps applications to premature children is not to be compared to those of breech delivery with the unauoidable asphyxia which accompanies it. Says Sarwey: For years the standpoint of the clinic has most positively confirmed that of authorities in general that vertex position is to be preferred to that of the breech, not only in narrow pelvis but especially when this condition is complicated by premature delivery. One only needs to remember that the prognosis for the child has been statistically proved to be much better in vertex positions, and that also the mother by reason of the fact that vertex presentations usually run an uncomplicated course is spared many operative measures. He says further: "It is by no means a useless task

Digitized by Google

history-ofobgyn.com
obgynhistory.net

to try to cause fixation of the head. The difficulty is usually to be found in the great demand made upon the willingness, patience and endurance of the operator. It may, however, be impossible even when no pelvic contraction exists, by reason of placenta previa, shortness of the cord, hydramnion, pendulous abdomen and uterus arcuatus.

I would remark here that it is especially important in the induction of labor to preserve the membranes as long as possible, preferably until dilatation is almost complete. Nothing contributes more to satisfactory progress.

Schrader, on the contrary, in the discussion over "the artificial induction and hastening of delivery" says "the sooner rupture of the membranes occurs the better for the child and the less complicated the 3d stage of labor." He frequently ruptures the membranes when no contra-indication (e.g., faulty position) forbids. Probably every accoucheur can recall cases in which a labor that had come to a complete stop was ended in a short time by rupiure of the membranes, but this is by no means always the case. I agree completely with Roesing, who calls the habitual rupture of the membranes as a method of inducing labor a two-edged sword. In the induction of labor one gets the best results by an expectant policy, i.e., by preserving the membranes. The latter is best accomplished by bring about a vertex presentation.

Cephalic version by the combined method then can accomplish good results even when the conditions regarded by Kehrer as essential are not strictly observed. If, however, either the cephalic or podalic is likely to be successful in a given case, podalic version gives under like conditions results which are usually to be prefered to cephalic, at least as far as full term children are concerned. If the accoucneur has time and inclination to work he can get good results with cephalic version, but the laity will not be as much impressed as with podalic version, the results of which are at once apparent. That is and will remain the chief obstacle to the popularization of this method in full term deliveries. This however does not count in the induction of labor, where haste is out the question. In the induction of labor I do not hesitate to give cephalic version by the combined method (when the external method has been given a thorough trial and failed) the preference by far over any other method—and this especially

Digitized by Google

history-ofobgyn.com
obgynhistory.net

in the interest of the child, for whose sake the operation is in most cases undertaken.

That cephalic version by the combined method can no longer claim a general preference is then apparent. But it is much to be desired that the method be more employed in the induction of labor, not only in the interest of the child but of the mother. The physician who undertakes to induce labor must be prepared for a great loss of time. It may be true that the tendency to hurry to delivery is not as great in the introduction of labor as in delivery at term, but it should be emphasized that here the question to consider is what method is attended by the least danger to the child. In the meantime the best course is to allow delivery in premature labors to pursue a normal, uncomplicated and safe, even if somewhat more lengthy course. Very often perhaps in the great majority of cases this is easily accomplished by external manipulation and postural treatment. If not the combined method will lead to the desired result—the establishment of a vertex presentation.

LITERATURE.

1. Ahlfeld, Lehrbuch der Geburtshülfe. Leipzig. 1898.
2. Aranowitsch, A., Inaugural-Dissertation. Bern., 1992.
3. Braun, C., Lehrbuch der Geburtshülfe. Wein., 1857.
4. Brosin, Centralblatt fur Gynäkologie. No. 36, 1890.
5. Budin, Gesellschaft für Geburtshülfe. Paris, 8—6, 1888.
6. Chiari, Braun u. Spaeth, Klinik der Geburtshülfe u Gynäkologie 1855.
7. Deckner, G., Ueber Uterusruptur. Inaug.—Dissert. Konigsberg, 1898.
8. Döderlein, Leitfaden für den Geburtshülflichen Operationksurs. Leipzig, 1893.
9. Eulenberg's Real-Encyklopadie. 1883.
10. Fiamant, Journ. compl. des sc. med. T. 30, 1904.
11. v. Franqué, Würzb. med. Zeitsch. VI, 1865.
12. Fritsch, Klinik der geburtshlfl. Operationen. Halle, 1894.
13. Hecker, C., Beobachtungen und Untersuchungen aus der Gebäranstalt zu Müchen von 1867–79. Müchen, 1881.
14. Hildebrandt, Königsberger med. Jahrbücher. 1859.
14. Hohl Lehrbuch der Geburtshülfe.
16. Hüter, v., Compendium der Geburtshülflichen Operationen. Leipzig, 1874.
17. Kehrer, Lehrbuch der Operativen Geburtshulfe. 1891.
18. Krantz, Die Aetiologie der gebhlfl. Dammverletzung und der Damsmchutz. Wiesbaden, 1900.

Digitized by Google

history-ofobgyn.com
obgynhistory.net

19. Kuneke, Bimanuelle Wendung. Göttingen, 1865.

20. Mattei Gaz. de Paris, No. 23, 1855.

21. Martin E., Beiträge zur Gynäkologie. Jena, 1849.

22. Meurer Ueber die Prophylaxis der Steislagen bei der Geburt. Centralbl. für Gynäkologie. No. 2, 1900.

23. Moriz, Die Wendung auf den Kopf, Inaug. Dissert Königsberg. 1873.

24. Müller, P. Handbuch der Geburtshülfe. Bd. iii. 1889. Fehling.

25. Derselbe, Ueber die Wendung, auf den Kopf und deren Wert für die gebhlfl. Praxis. Samml Klinischer, Vorträge. No, 77.

26. Naegele, Lehrbuch der Geburtshülfe, 1872 (Herausgegeben von Grenser).

27. Ritgen, Anzeigen der Mechanischer Hülfen bei entbindungen.

28. Runge, Lehrbuch der Geburtshulfe.

29. Sarwey, Die Künstliche Frühgeburt bei Beckenenge, Berlin,1896.

30. Scanzoni, Lehrbuch der Geburshülfe. Wien, 1852.

31. Schauta, Lehrbuch der gesammten Gynäkologie. 1896.

32. Derselbe, Grundriss der operativen Geburtshülfe. 1896.

33. Schröder, Lehrbuch der Geburtshülfe. Bonn, 1891. (Bearbeitet von Ohlshausen und Veit).

34. Derselbe, Schwangerschaft, Geburt u. Wochenbett. Bonn, 1876.

35. Sickel, Bericht uber die Ergebnisse in mehreren Gebäranstallen, etc. Leipzig, 1859 (Schmidt's Jahrb. Bd. 88 u. 164. Jahrgang, 1855).

36. Sitzungsbericht der Hamburger Geburtshlfl. Gesellschaft, 23-11. 1897. Centralbl. für Gyn. 1900, No. 11.

37. Southwick (Boston), cephalic version for breech presentation. Amer. Jour. of Obstetrics, July, 1890.

38. Spaeth, J. Compendium der Geburtskunde. 1857.

39. Spiegelberg, Lehrbuch der Geburtshulfe. 1878.

40. Trachet, Arch. de Local. 1889. Centralbl fur Gyn. 1899. No. 32.

41. Wehn, Erfahrungen u Bermerkungen,uber die Wendung,Giessen 1833.

42. v. Winckel, Lehrbuch der Geburtshülfe. 1893.

43. Zweifel, Lehrbuch der Geburtshülfe. 1892.

Digitized by Google

history-ofobgyn.com
obgynhistory.net